

US.Pat.Apl.Nr: 10/662,818

Docket: 616-76US

**Remarks**  
submitted March 2006

[001] This is in response to the Office Action dated 31 January 2006.

**[002] Amendments**

We wish to add new claims 13,14, as on the attached sheets of claims. Claim 13 goes with claims 1-11, and claim 14 goes with claim 12.

[003] Re the Requirement for Election, under 35 USC 121.

Since we are required, under Rule 1.143, to make an election in this response, we elect claims 1-11,13.

However, we traverse the requirement in this case, for the reasons as described below.

[004] The PTO identifies Invention I as the subject matter of claims 1-11 (apparatus), and invention II as the subject matter of claim 12 (procedure).

The PTO position is that the apparatus of claims 1-11 can be used to practice another and materially different process from the procedure claimed in claim 12. The PTO position is that the apparatus of claims 1-11 can be used to perform the electrolytic reduction of ammonia into a reactant other than nitrogen gas.

[005] The first comment we make in this regard is that ammonia CANNOT be electrolytically reduced into a reactant other than nitrogen gas. Ammonia (or rather, ammonium) already is the most reduced form of nitrogen. (The most oxidised form is nitrate; nitrogen gas is partway along the reduction/oxidation scale.)

Thus, the PTO position is incorrect as a matter of thermodynamic chemistry. The requirement for election /restriction /division must be vacated /withdrawn, simply for that reason.

If the PTO decides to continue the requirement, we request to be provided with an example of what the reactant other than nitrogen gas might be.

[006] It is possible that the PTO statement regarding "reduction" might be a simple slip, and that the examiner really intended to state: .....such as the electrolytic oxidation of ammonia into a reactant other than nitrogen gas. We will accept that it might be possible to use an apparatus to oxidise ammonia into

a reactant other than nitrogen gas, and that such apparatus might fall within the scope of claim 1. We proceed with the rest of this response in anticipation of receiving the above corrected version of the PTO position, i.e with "reduction" changed to "oxidation".

[007] The PTO position is that the claim 1 apparatus not only has the capability of being used to oxidise ammonium to nitrogen gas, but also the claim 1 apparatus has the capability of being used to oxidise ammonium into a reactant other than nitrogen gas.

On its own, of course, this is not enough to justify a requirement for division. Of course, in a properly presented grounds for restriction between two claims, the PTO does not just point out the scope of one of the claims - rather, the PTO points out the difference between the scopes of the two claims.

Given that the PTO has identified the scope of only one of the claims, and has not identified the difference in scope between the two claims, in our view the requirement has not been properly made out, as a prima facie case, and must be withdrawn for that reason.

However, we might assume that it is ALSO the PTO position that the procedural steps recited in claim 12 COULD NOT be used to oxidise ammonium into a reactant other than nitrogen gas. (The reason we might assume this is that, if the PTO considered that the procedure of claim 12 could be used for oxidising ammonium into a reactant other than nitrogen gas, then the PTO presumably would not have made the restriction requirement.) We will proceed as if the PTO position included the point that claim 12 CANNOT be used to oxidise ammonium into a reactant other than nitrogen gas.

[008] Claim 1 recites:

Apparatus for diminishing the concentration of ammonium in waste-water, and for disposing of the ammonium as nitrogen gas....

Claim 12 recites:

Procedure for diminishing the concentration of ammonium in waste-water, and for disposing of the ammonium as nitrogen gas....

Thus, apart from the first word, the first feature of claim 1 is exactly the same as the first feature of claim 12.

The PTO position is that the apparatus of claim 1 can be used to perform the electrolytic oxidation of ammonia into a reactant other than nitrogen gas. In order for an apparatus to fall within the scope of claim 1, that apparatus must be physically capable of, and structurally suitable for, oxidising ammonium to nitrogen gas. But if that same apparatus (i.e an apparatus with the physical and structural features necessary to endow the apparatus with those capabilities) were to be used for oxidising ammonium into some reactant other than nitrogen gas, then that same apparatus would still be covered by claim 1. Insofar as that is the PTO position regarding the scope of claim 1, we agree with it.

However, we can consider claim 12 in exactly the same way. Thus, we note that: if the sequence of procedural steps as recited in claim 12 were to be used to oxidise ammonium into a reactant other than nitrogen gas, then that sequence of procedural steps would still be covered by claim 12. Just as the **apparatus** of claim 1 is capable of, but not necessarily used for, oxidising ammonium into a reactant other than nitrogen gas -- so, equally, the **procedure** recited in claim 12 is likewise capable of, but not necessarily used for, oxidising ammonium into a reactant other than nitrogen gas.

Words in claims must be construed consistently. Both claim 1 and claim 12 contain the same phrase: ....for diminishing the concentration of ammonium in waste-water, and for disposing of the ammonium as nitrogen gas.... The PTO cannot construe those words in a particular way when reading them in claim 1, and then construe those exact same words in a materially different way when reading them in claim 12. The notional skilled person decides how the words are to be construed, and that person is always consistent.

[009] In short, as we understand it, the PTO's requirement for Division depends on the PTO position that (a) an apparatus that comprises the physical features recited in claim 1 CAN be used to oxidise ammonium into a reactant other than nitrogen gas, while (b) a procedure that comprises the physical steps recited in claim 11 CANNOT be used to oxidise ammonium into a reactant other than nitrogen gas.

As explained, we feel this position is mistaken as a matter of the scopes of the two claims, and that the requirement for restriction must be withdrawn for that reason.

If the PTO decides not to examine claim 12, we request a carefully reasoned explanation as to just how/why would a person skilled in the art find a material difference between claim 1 and claim 12 -- the notion that the apparatus of claim 1 can be used to produce another reactant while the procedure of claim 12 cannot be used to produce another reactant, will not serve.

[0010] If the PTO should in future contend that the "material difference" between claim 1 and claim 12 lies in some feature other than the respective first features of the two claims, that would be a New Issue. The "material difference" as expressed in the O/A is nothing but the use of the apparatus to oxidise ammonium to a reactant other than nitrogen gas, which is the subject of the first features of claims 1 and 12.


[0011] The fact that prior art relating to an invention might be found in two different classification headings is not a valid ground for requiring restriction. Nothing in MPEP makes it so.

[0012] The PTO must search BOTH class 205/617 AND class 204/278, whichever invention we elect. Given that we have elected the apparatus claims (claims 1-11), if the PTO decides not to search in class 205/617, we request a carefully reasoned explanation why not.

It is certainly possible that prior art that is highly relevant to the apparatus claims could be present

in 205/627. Suppose an exact duplicate of the present specification has already been patented, in which the applicant of that patent happened to elect the process claim, claim 12, whereby that patent is then classified under 205/617. And now, we elect the apparatus claims. In such a case, if the examiner only searches in 204/278, this exact duplicate of our specification in 205/617 would not be discovered! Obviously, both classifications must be searched, whichever claims are elected.

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Encl: amended claims (4 pages)